Claim 1 (Currently Amended): An acceleration sensor for detecting acceleration, comprising:

a base having a first surface delineated by a first plurality of edges;

a transducer that is not permanently oscillating, is supported at the base and exhibits torsion vibration only when acceleration is caused;

a weight portion that is connected to the not permanently oscillating transducer, and supported at a position different from the center of gravity of the transducer and the weight portion itself, the weight portion having a first surface delineated by a second plurality of edges, each edge of the first plurality of edges being adjacent to a respective edge of the second plurality of edges; and

a detecting section which is formed on the transducer and detects the amount of characteristic corresponding to a torsion of the transducer caused by an angular moment centered on the supporting position of the weight portion upon application of acceleration in one direction to the transducer and the weight portion;

wherein a face of the transducer is made flush with a face of the weight portion, and the base, the transducer and the weight portion are stacked in the height direction, and the transducer is a torsion vibrator having two sliding vibrators.

Claim 2 (Currently Amended): The acceleration sensor according to claim 1, wherein ~~the transducer is provided as a torsion vibrator made by a piezoelectric element, and~~ the amount of characteristic is a voltage ~~in the torsion vibrator corresponding to the angular moment~~ caused by sliding stresses having directions different from each other on the two sliding vibrators.

Claim 3 (Withdrawn): The acceleration sensor according to claim 1, wherein

the transducer comprises two piezoelectric elements which are mechanically connected to each other and are subjected to sliding deformation.

Claim 4 (Withdrawn): An acceleration sensor for detecting acceleration, comprising;

a transducer;

a weight portion that is connected to the transducer, and supported at a position different from the center of gravity of the transducer and the acceleration sensor; and

a detecting section which detects a Coriolis force that caused by a rotation angular velocity exerted in the transducer upon application of an acceleration in one direction to the transducer and the weight portion while the transducer is vibrating in a constant direction,

wherein a face of the transducer is made flush with a face of the weight portion.

Claim 5 (Withdrawn): The acceleration sensor according to claim 4, wherein

a rotation axis of the rotation angular velocity is set in the same direction as a detection axis of the Coriolis force.

Claim 6 (Withdrawn): The acceleration sensor according to claim 4, wherein at least one portion of the weight portion is formed as an elastic member.

Claim 7 (Withdrawn): An acceleration sensor for detecting acceleration, comprising:

a first sensor having a first vibrator supported at a position, with the center of gravity thereof being different from the position at which the first transducer is supported, wherein, upon

application of an acceleration in one direction, a rotation angular velocity is exerted in the first transducer;

a second sensor having a second transducer supported at a position, with the center of gravity thereof being the same as the position at which the second transducer is supported, wherein, upon application of an acceleration in one direction, no rotation angular velocity is exerted in the second transducer; and

a differential detector which detects a difference between outputs of the first sensor and the second sensor as to confirm a state of linear motion.

Claim 8 (Withdrawn): The acceleration sensor according to claim 7, wherein

a rotation axis of the rotation angular velocity of the first sensor and a rotation axis of the rotation angular velocity of the second sensor are set in the same direction.

Claim 9 (Withdrawn): The acceleration sensor according to claim 7, wherein

the characteristic of the first transducer and the characteristic of the second transducer are coincident with each other.

Claim 10 (Withdrawn): The acceleration sensor according to claim 8, wherein

the characteristic of the first transducer and the characteristic of the second transducer are coincident with each other.

Claim 11 (Withdrawn): The acceleration sensor according to claim 7, wherein

a plurality of sets, each of said sets comprises the first sensor, the second sensor and the differential detector are provided.

Claim 12 (Withdrawn): The acceleration sensor according to claim 8, wherein a plurality of sets each of comprises the first sensor, the second sensor, and the differential detector are provided.

Claim 13 (Withdrawn): The acceleration sensor according to claim 9, wherein a plurality sets, each of said sets comprises the first sensor, the second sensor and the differential detector are provided.

Claim 14 (Withdrawn): The acceleration sensor according to claim 10, wherein a plurality of sets, each of said sets comprises the first sensor, the second sensor and the differential detector are provided.

Claim 15 (Withdrawn): The acceleration sensor according to claim 11, wherein the sets are arranged so that detection directions for acceleration in the respective sets are made orthogonal to each other.

Claim 16 (Withdrawn): The acceleration sensor according to claim 12, wherein the sets are arranged so that detection directions for acceleration in the respective sets are made orthogonal to each other.

Claim 17 (Withdrawn): The acceleration sensor according to claim 13, wherein the sets are arranged so that detection directions for acceleration in the respective sets are made orthogonal to each other.

Claim 18 (Withdrawn): The acceleration sensor according to claim 14, wherein the sets are arranged so that detection directions for acceleration in the respective sets are made orthogonal to each other.